GEOLOGI DAN STUDI ALTERASI MINERALISASI DAERAH GUNUNG IJO DAN SEKITARNYA KECAMATANBAGELEN, KABUPATEN PURWOREJO, PROVINSI JAWA TENGAH

Martin Sinaga

ABSTRACT

Daerah pemetaan geologi terletak di daerah Kulonprogo, Kecamatan Bagelen, Kabupaten Purworejo, Jawa Tengah pada koordinat 395000°E- 400000°E dan 9136000°N - 9141000°N. Pemetaan geologi dilakukan dengan luas 25 km2 dan skala peta 1:12.500. Penelitian ini bertujuan untuk mengkaji alterasi dan mineralisasi berdasarkan data XRD, AAS, petrografi, dan mineragrafi untuk mengetahui tipe endapan mineralnya. Satuan geomorfologi daerah penelitian dapat dibedakan menjadi empat, yakni Satuan pegunungan vulkanik berlereng sangat terjal, Satuan perbukitan vulkanik terdenudasi berlereng terjal, Satuan Pegunungan vulkanik berlereng sangat terjal dan Satuan perbukitan stuktural berlereng terjal. Tahap geomorfik daerah penelitian adalah dewasa dan pola aliran sungai yaitu radial dan pararel. Stratigrafi daerah penelitian dapat dibagi menjadi enam satuan tidak resmi, dari tua ke muda, yaitu Satuan Breksi Andesit, Satuan Andesit, Satuan Breksi Autoklastik, Satuan Intrusi Andesit Basaltik, Satuan Intrusi Andesit Porfiri dan Satuan Intrusi Dasit. Satuan-satuan batuan di daerah penelitian terbentuk kala Oligosen akhir hingga Miosen akhir. Struktur geologi yang ditemukan di daerah pemetaan merupakan sesar mengiri turun Jatirejo, sesar mengiri turun Semagung, sesar mengiri turun Soko Agung, sesar mengiri naik Hargorojo dan sesar mengiri naik Plampang. Zona ubahan hidrotermal yang terbentuk di daerah penelitian berupa Zona Klorit-Epidot-Kalsit-Albit, Zona Kuarsa-Monmorilonit-Serisit-Kaolinit dan Zona Kuarsa-Adularia. Zona ubahan di daerah penelitian dikontrol oleh struktur sesar mendatar. Urat kuarsa yang terbentuk memiliki arah dominan baratlaut-tenggara (N220°E-N240°E) dengan tekstur berupa massif, lattice blanded, saccharoidal, sulfide-disseminated sulfide, cockade dan Comb/ Sisir. Temperatur pembentukan mineral berkisar antara 210°-230°C merupakan ciri endapan sistem epitermal. Tekstur urat kuarsa yang hadir serta kehadiran mineral serisit menunjukkan bahwa daerah penelitian masuk dalam system epitermal sulfide rendah. Berdasarkan hasil analisis geokimia didapatkan kadar Au >0,06-31.22 ppm, Cu >4-59 ppm, Pb >12-568 ppm, Zn 15-1620 ppm, Ag >8-39 ppm.

Kata kunci: *Gunung ijo, , alterasi, epitermal,low sulfidata*

GEOLOGI DAN STUDI MINERALIZATION ALTERASION OF IJO MOUNTAIN AND SURROUNDING AREA BAGELEN DISTRICT, PURWOREJO DISTRICT, PROVINCE CENTRAL JAVA

Martin Sinaga

ABSTRACT

The geological mapping area is located in Kulonprogo area, Bagelen Subdistrict, Purworejo District, Central Java at coordinates 395000 ° E- 400000 ° E and 9136000 ° N - 9141000 ° N. Geological mapping was conducted with an area of 25 km2 and a map scale of 1: 12,500 This research aims to study the alteration and mineralized based on data XRD, AAS, Petrography, mineragraphy to find out the type of mineral deposits. Geomorphology unit of research area can be divided into four, namely Unit of Volcanic mountains is very steep slope, Unit of Vulcanic hills Terududasi steep slope, Volcanic mountains Unit very steep slope and Unit of Struktural hills steep slope. Geomorphic stage of research area is adult with the radial and parallel river flow pattern. Stratigraphy of the study area can be divided into six unofficial units, from old to young, namely Andesite Breccia Unit, Andesite Unit, Autoclastic Breccia Unit, Basaltic Andesite Intrusion Unit, Andesite Porphyry Intrusion Unit and Dasit Intrusion Unit. Rock units in the research area formed from the final Oligocene to the final Miocene. The geological structure found in the mapping area is the fault leading down Jatirejo, the cesareading down the Semagung, the fault leading down Soko Agung, the leaning fault up Hargorojo and the leaning fault up Plampang. The hydrothermal alteration zone formed in the research area is Chlorite-Epidot-Calcite-Albit Zone, Quartz-Monmorillonite-Sericite Zone of Kaolinite and Quartz-Adularia Zone. The change zones in the study area are controlled by the horizontal fault structure. The quartz vein formed has a dominant northwest-southeast direction (N220 ° E-N240 ° E) with massive texture, lattice blanded, saccharoidal, sulfide-disseminated sulfide, cockade and Comb/Comb. Mineral formation temperature ranging from 210 ° -230 ° C is characteristic of epithermal depositional system. Quartz vein texture and appereance of sericite mineral contain epithermal low sulphidation system. Based on the results of geochemical analysis it is known that level of Au > 0,06-31.22 ppm, Cu > 4-59 ppm, Pb > 12-568 ppm, Zn 15-1620 ppm, Ag> 8-39 ppm.

Keywords: *Mount ijo, alteration, epitermal, low sulfidate*